

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
1610-1610.6 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to- space)	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION Radiodetermination-Satellite (Earth-to-space)	1610-1610.6 MOBILE-SATELLITE (Earth-to-space) US319 AERONAUTICAL RADIONAVIGATION US260 RADIODETERMINATION-SATELLITE(Earth-to-space)		Satellite Communications (25) Aviation (87)
S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	S5.341 S5.364 S5.366 S5.367 S5.368 S5.370 S5.372	S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372	S5.341 S5.364 S5.366 S5.367 S5.368 S5.372 US208		
1610.6-1613.8 MOBILE-SATELLITE (Earth-to-space) S5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION	1610.6-1613.8 MOBILE-SATELLITE (Earth-to-space) S5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to- space)	1610.6-1613.8 MOBILE-SATELLITE (Earth-to-space) S5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space)	1610.6-1613.8 MOBILE-SATELLITE (Earth-to-space) US319 RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION US260 RADIODETERMINATION-SATELLITE (Earth-to-space)		
S5.149 S5.341 S5.355 S5.359 S5.363 S5.364 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	S5.149 S5.341 S5.364 S5.366 S5.367 S5.368 S5.370 S5.372	S5.149 S5.341 S5.355 S5.359 S5.364 S5.366 S5.367 S5.368 S5.369 S5.372	S5.149 S5.341 S5.364 S5.366 S5.367 S5.368 S5.372 US208		
1613.8-1626.5 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth)	1613.8-1626.5 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION- SATELLITE (Earth-to- space) Mobile-satellite (space-to- Earth)	1613.8-1626.5 MOBILE-SATELLITE (Earth-to-space) S5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to- Earth) Radiodetermination- satellite (Earth-to-space)	1613.8-1626.5 MOBILE-SATELLITE (Earth-to-space) US319 AERONAUTICAL RADIONAVIGATION US260 RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth)		
S5.341 S5.355 S5.359 S5.363 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.371 S5.372	S5.341 S5.364 S5.365 S5.366 S5.367 S5.368 S5.370 S5.372	S5.341 S5.355 S5.359 S5.364 S5.365 S5.366 S5.367 S5.368 S5.369 S5.372	S5.341 S5.364 S5.365 S5.366 S5.367 S5.368 S5.372 US208		

2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.351A Radiolocation  S5.150 S5.371 S5.397 S5.398 S5.399 S5.400 S5.402	2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.351A RADIOLOCATION RADIODETERMINATION- SATELLITE (space-to- Earth) S5.398  S5.150 S5.402	2483.5-2500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) S5.351A RADIOLOCATION Radiodetermination-satellite (space-to-Earth) S5.398  S5.150 S5.400 S5.402	2483.5-2500 MOBILE-SATELLITE (space-to-Earth) US319 RADIODETERMINATION- SATELLITE (space-to- Earth) S5.398  S5.150 S5.402 US41	2483.5-2500 MOBILE-SATELLITE (space-to-Earth) US319 RADIODETERMINATION- SATELLITE (space-to- Earth) S5.398  S5.150 S5.402 US41 NG147	ISM Equipment (18) Satellite Communications (25) Private Land Mobile (90) Fixed Microwave (101)
2500-2520 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile S5.384A MOBILE-SATELLITE (space-to-Earth) S5.403 S5.351A  S5.405 S5.407 S5.412 S5.414	2500-2520 FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile S5.384A MOBILE-SATELLITE (space-to-Earth) S5.403 S5.351A  S5.404 S5.407 S5.414 S5.415A	2500-2520 FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile S5.384A MOBILE-SATELLITE (space-to-Earth) S5.403 S5.351A  S5.403 S5.415A	2500-2655	2500-2655 FIXED S5.409 S5.411 US205 FIXED-SATELLITE (space-to-Earth) NG102 MOBILE except aeronautical mobile BROADCASTING- SATELLITE NG101	Domestic Public Fixed (21) Auxiliary Broadcasting (74)
2520-2655 FIXED S5.409 S5.410 S5.411 MOBILE except aeronautical mobile S5.384A BROADCASTING- SATELLITE S5.413 S5.416  S5.339 S5.403 S5.405 S5.412 S5.418	2520-2655 FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile S5.384A BROADCASTING- SATELLITE S5.413 S5.416  S5.339 S5.403	2520-2535 FIXED S5.409 S5.411 FIXED-SATELLITE (space-to-Earth) S5.415 MOBILE except aeronautical mobile S5.384A BROADCASTING- SATELLITE S5.413 S5.416  S5.403 S5.415A  2535-2655 FIXED S5.409 S5.411 MOBILE except aeronautical mobile S5.384A BROADCASTING- SATELLITE S5.413 S5.416  S5.339 S5.418	2520-2655 FIXED S5.409 S5.411 US205 FIXED-SATELLITE (space-to-Earth) NG102 MOBILE except aeronautical mobile BROADCASTING- SATELLITE NG101  S5.339 US205 US269	2520-2655 FIXED S5.409 S5.411 US205 FIXED-SATELLITE (space-to-Earth) NG102 MOBILE except aeronautical mobile BROADCASTING- SATELLITE NG101  S5.339 US269	



International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
See previous page for 3600-4200 MHz	3700-4200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile		3700-4200	3700-4200 FIXED NG41 FIXED-SATELLITE (space-to-Earth)	International Fixed (23) Satellite Communications (25) Fixed Microwave (101)
4200-4400 AERONAUTICAL RADIONAVIGATION SS.438 SS.437 SS.439 SS.440			4200-4400 AERONAUTICAL RADIONAVIGATION SS.440 US261		Aviation (87)
4400-4500 FIXED MOBILE			4400-4500 FIXED MOBILE	4400-4500	
4500-4800 FIXED FIXED-SATELLITE (space-to-Earth) SS.441 MOBILE			4500-4800 FIXED MOBILE	4500-4800 FIXED-SATELLITE (space-to-Earth) 792A	
4800-4990 FIXED MOBILE SS.442 Radio astronomy			US245 4800-4940 FIXED MOBILE	US245 4800-4940	
			SS.149 US203	SS.149 US203	
			4940-4990 FIXED MOBILE	4940-4990	Note: 4940-4990 MHz became non-Federal Government exclusive spectrum in March 1999
SS.149 SS.339 SS.443			SS.149 SS.339 US257	SS.149 SS.339 US257	
4990-5000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive)			4990-5000 RADIO ASTRONOMY US74 Space research (passive)		
SS.149			US246		
5000-5150 AERONAUTICAL RADIONAVIGATION			5000-5250 AERONAUTICAL RADIO-NAVIGATION US260	5000-5150 AERONAUTICAL RADIO-NAVIGATION US260	Satellite Communications (25) Aviation (87)
SS.367 SS.444 SS.444A				SS.367 SS.444 SS.444A US211 US344	

5150-5250 AERONAUTICAL RADIONAVIGATION FIXED-SATELLITE (Earth-to-space) SS.447A		5150-5250 AERONAUTICAL RADIO- NAVIGATION US260 FIXED-SATELLITE (Earth- to-space) SS.447A US344	
SS.446 SS.447 SS.447B SS.447C 5250-5255 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH SS.447D	SS.367 SS.444 US211 US307 US344 5250-5350 RADIOLOCATION SS.333 US110 G59	SS.447C US211 US307 5250-5350 Radio location SS.333 US110	
SS.448 SS.448A 5255-5350 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) SS.448 SS.448A			
5350-5460 EARTH EXPLORATION-SATELLITE (active) SS.448B AERONAUTICAL RADIONAVIGATION SS.449 Radio location	5350-5460 AERONAUTICAL RADIO- NAVIGATION SS.449 RADIOLOCATION G56 US48	5350-5460 AERONAUTICAL RADIO- NAVIGATION SS.449 Radio location US48	Aviation (87)
5460-5470 RADIONAVIGATION SS.449 Radio location	5460-5470 RADIONAVIGATION SS.449 Radio location G56 US49 US65	5460-5470 RADIONAVIGATION SS.449 Radio location US49 US65	
5470-5650 MARITIME RADIONAVIGATION Radio location	5470-5600 MARITIME RADIONAVIGATION Radio location G56 US50 US65 5600-5650 MARITIME RADIONAVIGATION METEOROLOGICAL AIDS Radio location US51 G56	5470-5600 MARITIME RADIONAVIGATION Radio location US50 US65 5600-5650 MARITIME RADIONAVIGATION METEOROLOGICAL AIDS Radio location US51	Maritime (80)
SS.450 SS.451 SS.452	SS.452 US65	SS.452 US65	

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
5650-5725 RADIOLOCATION Amateur Space research (deep space)			5650-5925 RADIOLOCATION G2	5650-5830 Amateur	ISM Equipment (18) Amateur (97)
SS.282 SS.451 SS.453 SS.454 SS.455					
5725-5830 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur	5725-5830 RADIOLOCATION Amateur				
SS.150 SS.451 SS.453 SS.455 SS.456	SS.150 SS.453 SS.455			SS.150 SS.282	
5830-5850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth)	5830-5850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth)			5830-5850 Amateur Amateur-satellite (space-to-Earth)	
SS.150 SS.451 SS.453 SS.455 SS.456	SS.150 SS.453 SS.455			SS.150	
5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation		5850-5925 FIXED-SATELLITE (Earth-to-space) US245 MOBILE NG160 Amateur	ISM Equipment (18) Private Land Mobile (90) Amateur (97)
SS.150	SS.150	SS.150	SS.150 US245	SS.150	
5925-6700 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE			5925-6425	5925-6425 FIXED NG41 FIXED-SATELLITE (Earth-to-space)	Satellite Communications (25) Fixed Microwave (101)
			6425-6525	6425-6525 FIXED-SATELLITE (Earth-to-space) MOBILE	Auxiliary Broadcasting (74) Cable TV Relay (78) Fixed Microwave (101)
			SS.440 SS.458	SS.440 SS.458	



SS.149 SS.440 SS.458 6700-7075 FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) SS.441 MOBILE	6525-6700	6525-6700 FIXED FIXED-SATELLITE (Earth-to-space)	Satellite Communications (25) Fixed Microwave (101)
	SS.149 SS.458	SS.149 SS.458	
	6700-7125	6700-6875 FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) SS.441 SS.458 SS.458A SS.458B	
SS.458 SS.458A SS.458B SS.458C 7075-7250 FIXED MOBILE	6875-7025	6875-7025 FIXED NG118 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) SS.441 MOBILE NG171	Satellite Communications (25) Auxiliary Broadcasting (74) Cable TV Relay (78)
	SS.458 SS.458A SS.458B	SS.458 SS.458A SS.458B	
	7025-7075	7025-7075 FIXED NG118 FIXED-SATELLITE (Earth-to-space) MOBILE NG171 SS.458 SS.458A SS.458B NG172	
SS.458 7125-7190 FIXED	7075-7125	7075-7125 FIXED NG118 MOBILE NG171	Auxiliary Broadcasting (74) Cable TV Relay (78)
	SS.458	SS.458	
	7125-7190	7125-7190	
SS.458 SS.459 SS.460 7235-7250 FIXED	SS.458 US252 G116	SS.458 US252	
	7190-7235	7190-7250	
	FIXED SPACE RESEARCH (Earth-to-space)		
SS.458 7235-7250 FIXED	SS.458		
	7235-7250		
	SS.458	SS.458	

International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
14.5-14.8 FIXED FIXED-SATELLITE (Earth-to-space) S5.510 MOBILE Space research			14.5-14.7145 FIXED Mobile Space research	14.5-15.1365	
14.8-15.35 FIXED MOBILE Space research			14.7145-15.1365 MOBILE Fixed Space research US310	14.7145-15.1365  US310	
			15.1365-15.35 FIXED Mobile Space research	15.1365-15.35	
S5.339			S5.339 US211	S5.339 US211	
15.35-15.4 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) S5.340 S5.511			15.35-15.4 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY US74 SPACE RESEARCH (passive) US246		
15.4-15.43 AERONAUTICAL RADIONAVIGATION S5.511D			15.4-15.43 AERONAUTICAL RADIONAVIGATION US260 US211		Aviation (87)
15.43-15.63 FIXED SATELLITE (Earth-to-space) S5.511A AERONAUTICAL RADIONAVIGATION  S5.511C			15.43-15.63 AERONAUTICAL RADIO- NAVIGATION US260  S5.511C US211 US359	15.43-15.63 FIXED SATELLITE (Earth-to-space) AERONAUTICAL RADIO- NAVIGATION US260  S5.511C US211 US359	Satellite Communications (25) Aviation (87)
15.63-15.7 AERONAUTICAL RADIONAVIGATION S5.511D			15.63-15.7 AERONAUTICAL RADIONAVIGATION US260 US211		Aviation (87)
15.7-16.6 RADIOLOCATION S5.512 S5.513			15.7-16.6 RADIOLOCATION US110 G59	15.7-17.2 Radiolocation US110	Private Land Mobile (90)



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## INTERNATIONAL FOOTNOTES

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I. New "S" Numbering Scheme

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S5.351A For the use of the bands 1525-1544 MHz, 1545-1559 MHz, 1610-1626.5 MHz, 1626.5-1645.5 MHz, 1646.5-1660.5 MHz, 1980-2010 MHz, 2170-2200 MHz, 2483.50-2500 MHz, 2500-2520 MHz and 2670-2690 MHz by the mobile-satellite service, see Resolutions 212 (Rev.WRC-97) and 225 (WRC-2000).

\*\*\*\*\*

S5.384A The bands, or portions of the bands, 1710-1885 MHz and 2500-2690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000) in accordance with Resolution 223 (WRC-2000). This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.

\*\*\*\*\*

S5.447 Additional allocation: in Germany, Austria, Belgium, Denmark, Spain, Estonia, Finland, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, Pakistan, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland and Tunisia, the band 5150-5250 MHz is also allocated to the mobile service, on a primary basis, subject to agreement obtained under No. S9.21.

S5.448 Additional allocation: in Austria, Azerbaijan, Bulgaria, Libya, Mongolia, Kyrgyzstan, Slovakia, the Czech Republic, Romania and Turkmenistan, the band 5250-5350 MHz is also allocated to the radionavigation service on a primary basis.

\*\*\*\*\*

S5.511A The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. S9.11A. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of -156 dB(W/m<sup>2</sup>) in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time.

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## UNITED STATES (US) FOOTNOTES

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US344 In the band 5091-5250 MHz, non-Government earth stations in the fixed-satellite service (Earth-to-space) shall be coordinated through the Frequency Assignment Subcommittee (see Recommendation ITU-R S.1342). In order to better protect the operation of the international standard system (microwave landing system) in the band 5000-5091 MHz, non-Government tracking and telecommand operations should be conducted in the band 5150-5250 MHz.

\*\*\*\*\*

US359 In the band 15.43-15.63 GHz, use of the fixed-satellite service (Earth-to-space) is limited to non-Government feeder links of non-geostationary systems in the mobile-satellite service. These non-Government earth stations shall be coordinated through the Frequency Assignment Subcommittee (see Annex 3 of Recommendation ITU-R S.1340).

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## NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

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NG171 In the band 6875-7125 MHz, the following two channels should be used for airborne TV pickup stations, wherever possible: 7075-7100 MHz and 7100-7125 MHz.

NG172 In the band 7025-7075 MHz, the fixed-satellite service (space-to-Earth) is allocated on a primary basis, but the use of this allocation shall be limited to two grandfathered satellite systems. Associated earth stations located within 300 meters of the following locations shall be grandfathered: (1) in the band 7025-7075 MHz, Brewster, Washington (48° 08' 46.7" N, 119° 42' 8.0" W); and, (2) in the band 7025-7055 MHz, Clifton, Texas (31° 47' 58.5" N, 97° 36' 46.7" W) and Finca Pascual, Puerto Rico (17° 58' 41.8" N, 67° 8' 12.6" W). All coordinates are specified in terms of the North American Datum of 1983.

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## PART 25--SATELLITE COMMUNICATIONS

3. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies Sections 4, 301, 302, 303, 307, 309 and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

4. Section 25.147 is added to read as follows:

§ 25.147 Licensing provision for NGSO MSS feeder downlinks in the band 6700-6875 MHz.

If an NGSO MSS satellite transmitting in the band 6700-6875 MHz causes harmful interference to previously licensed co-frequency Public Safety facilities, then that satellite licensee is obligated to remedy the interference complaint.

5. Section 25.202(a)(1) is revised to read as follows:

**§ 25.202 Frequencies, frequency tolerance and emission limitations.**

(a)(1) **Frequency band.** The following frequencies are available for use by the fixed-satellite service. Precise frequencies and bandwidths of emission shall be assigned on a case-by-case basis.

Space-to-Earth (GHz)	Earth-to-space (GHz)
3.7-4.2 <sup>1</sup>	5.091-5.25 <sup>12,14</sup>
6.7-7.025 <sup>12</sup>	5.925-6.425 <sup>1</sup>
10.7-10.95 <sup>1,12</sup>	12.75-13.15 <sup>1,12</sup>
10.95-11.2 <sup>1,2,12</sup>	13.2125-13.25 <sup>1,12</sup>
11.2-11.45 <sup>1,12</sup>	13.75-14 <sup>4,12</sup>
11.45-11.7 <sup>1,2,12</sup>	14-14.2 <sup>5</sup>
11.7-12.2 <sup>3</sup>	14.2-14.5
12.2-12.7 <sup>13</sup>	15.43-15.63 <sup>12,15</sup>
18.3-18.58 <sup>1,10</sup>	17.3-17.8 <sup>9</sup>
18.58-18.8 <sup>6,10,11</sup>	27.5-29.5 <sup>1</sup>
18.8-19.3 <sup>7,10</sup>	29.5-30
19.3-19.7 <sup>8,10</sup>	48.2-50.2
19.7-20.2 <sup>10</sup>	
37.6-38.6	
40-41	

\* \* \*

<sup>14</sup> See 47 C.F.R. § 2.106, footnotes S5.444A and US344, for conditions that apply to this band.

<sup>15</sup> See 47 C.F.R. § 2.106, footnotes S5.511C and US359, for conditions that apply to this band.

\* \* \* \* \*

6. Section 25.208 is amended by adding new paragraph (n) to read as follows:

**§ 25.208 Power flux density limits.**

\* \* \* \* \*

(n) The power-flux density at the Earth's surface produced by emissions from a space station in the fixed-satellite service (space-to-Earth), for all conditions and for all methods of modulation, shall not exceed the limits given in Table N. These limits relate to the power flux-density which would be obtained under assumed free-space conditions.

Table N: Limits of power-flux density from space stations in the band 6700-7075 MHz				
Frequency band	Limit in dB(W/m <sup>2</sup> ) for angle of arrival ( $\delta$ ) above the horizontal plane			Reference bandwidth
	0°-5°	5°-25°	25°-90°	
6700-6825 MHz	-137	-137 + 0.5( $\delta$ -5)	-127	1 MHz
6825-7075 MHz	-154 and -134	-154 + 0.5( $\delta$ -5) and -134 + 0.5( $\delta$ -5)	-144 and -124	4 kHz  1 MHz



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**PART 87--AVIATION SERVICES**

7. The authority citation for Part 87 continues to read as follows:

**AUTHORITY:** 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, 307(e) unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-156, 301-609.

8. Section 87.173 is amended by revising paragraph (b) to read as follows:

**§ 87.173 Frequencies.**

\*\*\*\*\*

(b) Frequency table:

Frequency or frequency band	Subpart	Class of station	Remarks
***	***	***	***
5000-5250 MHz <sup>1</sup> .....	Q	MA, RLW	Microwave landing system.
***	***	***	***
15400-15700 MHz <sup>2</sup> .....	Q	RL	Aeronautical radionavigation.
***	***	***	***

<sup>1</sup> See 47 C.F.R. § 2.106, footnotes S5.444A and US344, for conditions that apply to this band.

<sup>2</sup> See 47 C.F.R. § 2.106, footnotes S5.511C and US359, for conditions that apply to this band.

## APPENDIX B: FINAL REGULATORY FLEXIBILITY CERTIFICATION

The Regulatory Flexibility Act ("RFA")<sup>170</sup> requires that a regulatory flexibility analysis be prepared for notice and comment rulemaking proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction." In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act. A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).

This Report and Order allocates the bands 5091-5250 MHz and 15.43-15.63 GHz for FSS uplinks on a primary basis, allocates the band 6700-7025 MHz on a primary basis for FSS downlinks, and limits the use of these FSS allocations to feeder links that would be used in conjunction with the service links of NGSO MSS systems. In addition, two satellite systems and three sites are grandfathered in the downlink band 7025-7075 MHz. We take this action on our own initiative in order to adopt domestically the NGSO MSS feeder link allocations that have been adopted internationally. These allocations will accommodate the growing demand for NGSO MSS services and will provide satellite operators with increased flexibility in the design of their systems.

The Commission has not developed a definition of small entities specifically applicable to the satellite services licensees here at issue. Therefore, the applicable definition of small entity in the satellite services industry is the definition under the Small Business Administration ("SBA") rules applicable to Communications Services "Not Elsewhere Classified."<sup>171</sup> This definition provides that a small entity is expressed as one with \$11.0 million or less in annual receipts. According to Census Bureau data, there are 848 firms that fall under the category of Communications Services, Not Elsewhere Classified. Of those, approximately 775 reported annual receipts of \$11 million or less and qualify as small entities.<sup>172</sup> The Census Bureau category is very broad and commercial satellite services constitute only a subset of its total.

None of the NGSO MSS licensees is a small business because each has revenues in excess of \$11 million annually or has a parent company or investors that have revenues in excess of \$11 million annually.

The Commission did not receive any comments on its the initial regulatory flexibility certification. Nonetheless, we take this opportunity to explain a *de minimus* burden with regards to terrestrial users in the band 6700-7025 MHz. In the *Notice of Proposed Rule Making*, the Commission proposed to allocate the band 6700-7075 MHz to the FSS for satellite transmissions down to earth stations on a primary shared basis with incumbent users. Because such co-primary use implies coordination, the comments of the terrestrial users focused on limiting the impact of the allocation by placing restrictions on earth station use of the band, that is, the terrestrial parties requested that the normal coordination process not apply to this band. In the *Report and Order*, the Commission requires the use of the normal coordination process in the band 6700-6875 MHz, which is used by fixed point-to-point microwave licensees. If gateway applications are filed prior to the completion of an upcoming rule making that will deal with final coordination rules in the band 6875-7025 MHz, then case-by-case

<sup>170</sup> The RFA, see 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract with American Advancement Act of 1996, Public Law 104-121, 110 Stat. 847 (1996) ("CWAAA"). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA").

<sup>171</sup> 13 C.F.R. § 121.201, Standard Industrial Classification (NAICS) Codes 48531, 513322, 51334, 513391.

<sup>172</sup> U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 2D, Employment Size of Firms: 1992.



coordination will be required of the gateway applicants. Our action to limit the number of sites for earth stations in the band 7025-7075 MHz to three will also reduce future coordination costs. The Commission finds that, because of the limited number of receive earth stations to be deployed and their viable locations (that is, in rural areas), there will be minimal impact on potential coordination costs. We therefore certify that this Report and Order will not have a significant economic impact on a substantial number of small entities.

The Commission will send a copy of the Report and Order, including a copy of this final certification, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Report and Order and this certification will be sent to the Chief Counsel for Advocacy of the Small Business Administration, and will be published in the Federal Register. *See* 5 U.S.C. § 605(b).

## APPENDIX C: PARTIES TO THE PROCEEDING

Comments filed on September 21, 1998:

Constellation Communications, Inc. ("Constellation")

ICO Services Limited ("ICO")

L/Q Licensee, Inc., Globalstar, L.P., and AirTouch Communications, Inc., Joint Comments of ("Globalstar")

Mobile Communications Holdings, Inc. ("MCHI")

Satellite CD Radio, Inc. (now "Sirius")

Society of Broadcast Engineers ("SBE")

Telecommunications Industry Association, Fixed Point-to-Point Communications Section, Wireless Communications Division of the ("TIA")

UTC, The Telecommunications Association ("UTC") [not listed in ECFS until March 26, 1999]

Late-filed Comments:

National Academy of Science's Committee on Radio Frequencies ("CORF") received on September 29, 1998

Reply Comments (extended to October 13, 1998):

American Petroleum Institute ("API")

Association of American Railroads ("AAR")

Association of Public-Safety Communications Officials-International, Inc. ("APCO")

Constellation

Globalstar

ICO

MCHI

National Association of Broadcasters ("NAB")

Pennsylvania, Commonwealth of ("Pennsylvania")

TIA

Late-filed Reply Comments:

SBE, received on October 26, 1998

Ex Parte Presentations

Globalstar, received on December 7, 1999

Globalstar, received on February 25, 2000

New ICO Global (Holdings) Ltd., received on May 9, 2001

Globalstar, received on May 14, 2001

Globalstar, received on June 26, 2001

SBE, received on August 7, 2001 (Reply comments in ET Docket No. 01-75)